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FROM FIELD AND STUDY

The Number of Species and Subspecies of Birds in Texas.—In view of recent comparisons of the lists of birds known from the various states of the United States, a note concerning the number of species in Texas may be of interest. Texas is by considerable the largest state in the Union, and this great size together with its peculiarly intermediate geographic position naturally lead us to expect a large and varied avifauna. Nor does this expectation fail, for the list of birds now known is decidedly larger than that of any other state, amounting to 605 species and subspecies. Of these, 310 are permanent residents, that is, they occur during both summer and winter at some place within the boundaries of the state, though several of them do not, so far as known, breed within its boundaries. There are 78 summer residents, which are species found during the summer at some locality in the state, though not necessarily breeding, but which do not pass the winter here. Winter residents, including all those that occur at this season in only one locality, number 138; transients 42; casual visitors 23; and accidental visitors 14.—HARRY C. OBERHOLSER, *Bureau of Biological Survey, Washington, D. C., January 6, 1917.*

A New Record for California.—On December 4, 1910, I secured a male specimen of the Savannah Sparrow (*Passerculus sandwichensis savanna*). The bird when shot was clinging to some dry grass stalks growing in a swampy meadow enclosed by dikes. This field, formerly open salt marsh, is near the north end of Woodley Island, Humboldt Bay, California.

Mr. J. Grinnell examined this sparrow in 1911 or 1912, and again in the fall of this year, 1916, pronouncing it to be *Passerculus s. savanna*. Mr. Grinnell wrote to me that, as far as he was aware, the Savannah Sparrow constitutes a new subspecies for the state.—C. I. CLAY, *Eureka, California, December 25, 1916.*

The Hooded Merganser in Stanislaus County, California.—Like many other species of wild fowl this interesting bird (*Lophodytes cucullatus*) is becoming scarcer on the Pacific Coast, and while still noted in some places it is seldom seen by most of us. In fact it is something like thirty years since one has appeared within my horizon. Hence it was a matter of surprise and pleasure to note a female of this species at the Rancho Dos Rios, Stanislaus County, California, on October 26, 1916. There was but a single individual, feeding near a small bunch of Coots in a slough of seepage water, something like a mile from the Tuolumne River.—JOSEPH MAILLIARD, *San Francisco, January 17, 1917.*

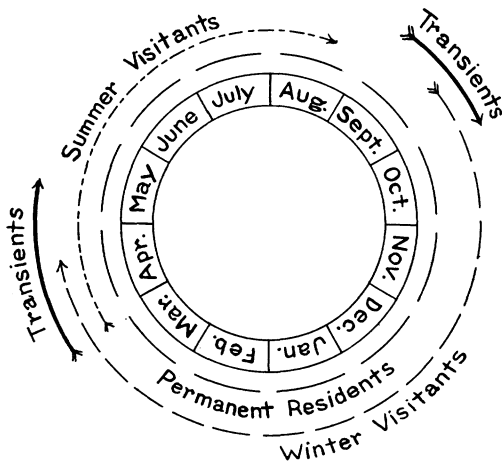


Fig. 25. A DIAGRAM FOR ILLUSTRATING THE SEASONAL SHIFTING OF THE BIRD CALENDAR.

A Diagram for Illustrating the Seasonal Shifting of the Bird Calendar.

Those who are concerned with teaching ornithology find frequent need for devices of one sort or another which will aid in conveying ideas. Diagrams on charts or lantern slides may often be used to advantage. The one here given is very likely to have been thought of by other teachers, and even published somewhere, though I do not recall having run across it myself. It is intended simply to show the composition of the bird-life of a locality, at any one period of the year, by seasonal categories. There are four of these: Permanent Residents, Summer Visitors, Winter Visitors, and Transients. The portion of the annual cycle in which each is present is shown; and it becomes possible to demonstrate the categories present in each one of the months. Thus, in January

there are only the Permanent Residents plus the Winter Visitors; and in April all the categories are present.—J. GRINNELL, *University of California, Berkeley, February 13, 1917.*

Notes on the Arizona Spotted Owl.—Two specimens of *Strix occidentalis lucida* were taken by Mr. E. J. Hands, October 2, 1915, at about 6500 feet altitude in Pinery Canyon, west slope of the Chiricahua Mountains, Cochise County, Arizona. They were male and female, and sitting huddled close together on a fir limb. The male, Mr. Hands reports, was a little darker than the female, which is now no. 4441, collection of J. E. Law. These are the first birds of this species noted by Mr. Hands and his brother, John Hands, in the thirty years they have spent in these mountains as miners and rangers.

Compared with six specimens of *S. o. occidentalis* from southern California, five from Los Angeles County (no. 494, coll. C. H. Richardson; nos. 1392, 1393, 1395, coll. G. Willett; no. 1477, coll. J. E. Law), and one from Ventura County (no. 830, coll. G. Willett), this female has very nearly the same tone of brown dorsally, though nos. 1392 and 1393 are slightly darker on hind neck, but the light transverse bars of remiges and rectrices are conspicuously broader and whiter. The southern California birds have these bars decidedly buffy. The chest of the Arizona bird has conspicuous broad white bars, giving predominance to the white coloration, in striking contrast to the California birds which have the brown decidedly predominating on the chest. In the Arizona bird the legs are slightly paler than in all the California specimens but no. 1477, and the under side of tail (remiges) again has the white predominating as against the buffy of *occidentalis*.—J. E. LAW, *Hollywood, California, January 25, 1917.*

Two Albino English Sparrows.—In the museum collection of the Colorado State Agricultural College are two specimens of albino English Sparrows (*Passer domesticus*). One was taken at Fort Collins, June 15, 1915, the other at Las Animas, January 5, 1917. Both are males, the Fort Collins specimen being an immature bird. Both birds are pure white, none of the feathers showing any trace of the normal colors; eyes are pink, and bills, legs and feet, flesh-color.—W. L. BURNETT, *Colorado Agricultural College, Fort Collins, Colorado, January 10, 1917.*

Is the California Woodpecker a Tippler?—I once read that woodpeckers sometimes become intoxicated from drinking the fermented sap of certain trees. I had thought that this might be only a dream of the "nature fakirs", but I have since seen something which leads me to suspect that the tale may have a foundation in fact. In October, 1911, I found a California Woodpecker (*Melanerpes formicivorus bairdi*) on the banks of the Sacramento River a few miles below Red Bluff, which gave every evidence of being drunk. It could use its wings for flight to a certain extent but could not steer a straight course in the air, and soon fell to earth again when it tried to fly. On the ground it tried to escape with uncertain sprawling motions. I captured it and could find no injury though I examined it with some care.—W. A. SQUIRES, *San Francisco, January 25, 1917.*

Concerning two forms of the Bryant Marsh Sparrow in California.—The remarks of W. A. Squires, in the November-December number of THE CONDOR, upon the possibility of there being two forms of *Passerculus sandwichensis bryanti* in the vicinity of San Francisco Bay should bring out some observations or records from other parties, and it is to be sincerely hoped that this will be the case. The question is an interesting one, and there seems a great likelihood that there really are two forms nearly alike but of different habits. I have taken specimens of what I supposed was *bryanti* at different times and places high up on hills and ranges, but, except for the one mentioned in the notes from Humboldt Bay, have never taken any at a high elevation in the height of the breeding season, although a few were taken at dates very close to it. These latter were supposed to be wanderers or non-breeders at the time, but recent events make me doubt this conclusion.

In our collection is a set of eggs, taken by C. A. Allen, at that time living at Nicasio, Marin County, California, the data of which are as follows: "Western Savannah Sparrow. Black Mt., Marin Co., Calif., Apr. 29, 1877. Eggs fresh. Nest on ground. Male shot. Nest on top of Mountain". This is not the exact wording of the data but is the essence of it. We did not see the parent of this set, and have always been very skeptical concerning its identification or connection with the nest, but have kept the set in abeyance all this time. It looks now as if Allen might have been close to the truth, and that the bird was this possible upland form. As Allen sold all his skins at that time,

this one is probably reposing in some eastern collection, and, if this note comes to the attention of any one who bought skins from him as far back as that, I will esteem it a great favor if he will look the matter up and let me know. Very likely this specimen is stowed away in some corner of the Biological Survey or National Museum in Washington, D. C. Meanwhile this is an interesting matter open to all observers, and this coming spring will be a fine time to commence special investigations upon the question. The Black Mountain mentioned is rather an isolated peak, probably about 2000 feet high, three or four miles north of Point Reyes Station, mostly bare on the southerly and easterly sides and on top.—JOSEPH MAILLIARD, *San Francisco, January 17, 1917.*

The Arctic Horned Owl in the State of Washington.—Positive records of the Arctic Horned Owl (*Bubo virginianus subarcticus*) for Washington are so scarce that it would seem advisable to mention all new ones in which the identity is certain. It may, consequently, be of interest to know that a very fine one was recently in the possession of Mr. Fred Edwards, of Tacoma. It was taken at Skagit, Skagit County, Washington, and on account of its large size I should say that it is in all probability a female. Mr. Edwards is uncertain regarding the exact date of its capture, but thinks it was in the winter of 1902.

The horned owls taken during the winter in Washington show such a wide range of variation that some might easily pass for *subarcticus* were it not for the more or less distinct bars of dusky on the feathers of the legs and feet. The specimen under discussion is one of the lightest in color that I have ever seen, the markings being paler than in many specimens of the Snowy Owl.—J. H. BOWLES, *Tacoma, Washington, January 17, 1917.*

An Invasion of California by the Eastern Goshawk.—Three Goshawks were received at the California Museum of Vertebrate Zoology during the past autumn, each of which I have identified as belonging to the subspecies *Astur atricapillus atricapillus*, thus adding a new name to the state list of birds. The data accompanying these specimens is as follows:

No. 27135, Mus. Vert. Zool.; male adult; Jamestown, Tuolumne County, California; November 21, 1916; shot by Frank Bambauer; presented to the Museum by Geo. W. Smith; prepared by H. S. Swarth (orig. no. 10524); weight, 793 grams; total length, 542 millimeters; spread of wings, 1600 mm.; iris, red; feet and tarsus, pale greenish yellow; bill, from cere forward, black, basally bluish; cere, pale greenish yellow (colors recorded at least two days after the death of the bird); stomach empty.

No. 27136, Mus. Vert. Zool.; male adult; Laytonville, Mendocino County, California; November 22, 1916; secured and presented to the Museum by Frank C. Clarke; prepared by H. S. Swarth (orig. no. 10526); weight, 905.5 grams; total length, 566 mm.; iris, red; stomach contained remains of a chicken about one-third grown (the hawk was shot as it dashed among poultry).

No. 27603, Mus. Vert. Zool.; male adult; 2 miles south of Palo Verde, Imperial County, California; November 2, 1916; collected by Leo Wiley (orig. no. 241).

The characters of the above three birds, by which they uniformly differ from the ordinary Western Goshawk (*Astur atricapillus striatulus*), lie in the general paleness of coloration. This, analyzed, consists in ashy tone of upper surface (dorsum slate-gray [of Ridgway, 1912], instead of dark neutral gray, as in *striatulus*); markings everywhere beneath, paler and narrower; streaks on throat and chest, mere lines, not more than one millimeter in width, mostly less (one to three millimeters wide in *striatulus*); flanks notably more lightly barred than in *striatulus*. In all these characters the three birds designated agree accurately with specimens from the eastern United States and from northeastern Alaska, these latter being unquestionable *atricapillus*. All other birds examined from California, Oregon and southeastern Alaska are *striatulus*.

Reports of the capture or observation of fully twenty-five other Goshawks have come in this winter from various localities from one end of the state to the other. Where age has been specified, only adults are concerned; no birds-of-the-year have come to notice. The present announcement, of the occurrence of *atricapillus* in California, at once brings doubt as to the subspecies involved in all previous winter records of Goshawks for the state. *Striatulus* is evidently the breeding bird in the Canadian zone within the

state; there are summer specimens at hand to prove it. It is quite likely that birds of this relatively resident race scatter out over the lower territory to a greater or less extent in winter; and thus it may be that all of the Goshawks recorded (rather rarely) in usual years, and some of the Goshawks this year, belong to the race *striatulus*. But there is good ground for suspecting that there has been the past winter an invasion of California (and probably most other western states) by the extreme northern and eastern race, *atricapillus*, and that such an invasion is of very infrequent occurrence.

In the *Auk* (xxxiv, 1917, pp. 87-88) C. D. Bunker reports that a "flight" of "American Goshawks" has visited Kansas the past fall; from October 27 to November 20, 1916, nine specimens were brought in to the Museum of the University of Kansas. The coincidence of these dates with those of the California-taken specimens is noteworthy.

In this connection, this year's invasion by the Snowy Owl into northern California is also of interest (see Bryant, *Calif. Fish and Game*, III, 1917, pp. 37-38). It is possible that the Eastern Goshawks and the Snowy Owls came from the same summer home, and that their unusually extended autumnal exodus was due to the same cause. This cause may be supposed to have been a lessening supply of food (rodents and birds) succeeding a period of plenty when the owl and hawk population had augmented above its normal.—J. GRINNELL, *Berkeley, California, February 13, 1917*.

Del Norte County Bird Notes.—August 13, 1916, proved not a day of evil omen, the 13th, but rather a most pleasant one, and producing interesting notes. Through the kindness of Martin Lund, the well known diver, who was looking for lost treasure claimed to be on the "Brother Jonathan" when she sank off Point St. George about fifty years ago, I was placed by those on his launch on Castle Island, off Point St. George and three miles north from Crescent City.

Despite the fact that eighteen head of sheep roam over the broken flat on the north slope, the Kaeding Petrel (*Oceanodroma kaedingi*) is nesting there to the number of a thousand or more, and often their burrows are dug right in the sheeps' trails. On the steep crags to the north and oceanwards I counted forty-three nests of the Baird Cormorant (*Phalacrocorax p. resplendens*) from one position. The Tufted Puffin (*Lunda cirrhata*) was nesting, in colonies and scattered pairs, in suitable places along the rim of the hundred foot bluff.

The top of Castle Island is accessible only at the northeast end and towards the mainland. It covers several acres, reaching its highest point at the southwest, where a row of pinnacles forms a barren ridge, the nesting site of numerous Western Gulls (*Larus occidentalis*). Nests of cormorants, puffins and gulls all contained large young. From a number of gulls' nests, the young had flown, but those of cormorants and puffins contained birds in every instance. The petrels had nearly all left the nests.

At the landing the water was dotted with exposed rocks, several rising some thirty feet high, the largest a continuation of the main island that could be reached by jumping from boulder to boulder at low water. At the water's edge, on the main rock and on the one just mentioned, I found two nests of the Pigeon Guillemot (*Cepphus columba*), each containing two large young. While I was sitting at the water's edge two Wandering Tattlers (*Heteractitis incanous*) quietly appeared through a crevice between the rocks, and stood erect eying me at a distance of exactly six feet.

While sitting in the same place where the tattlers had appeared, eating lunch and watching the California Murres (*Uria troille californica*) travelling between Castle Rock and the one at my back, I observed a flock of about a dozen turnstones fly by. Most interesting of all, though, were the actions of five Black Oyster-catchers (*Haematopus bachmani*). They sat close together on a nearby rock, alert, and with their occasional calls, accompanied by the sudden uplifting of the forward part of their bodies. When I moved the piping became more frequent, and when I arose and moved in the birds' direction, they circled about, alighting on a nearby rock, and again on the one from which they had flown.

Grinnell's "Distributional List of the Birds of California", gives Trinidad, Humboldt County, as the only locality in California where this species is known to occur north of the Farallon Islands and Point Reyes. Castle Island, off Point St. George, is probably the northernmost rock of any size on the California coast, so the birds I saw probably hold the northern record for the state.—C. I. CLAY, *Eureka, California, December 25, 1916*.